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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,392	04/06/2005	Philip J Haney	20030117-US	4873
42716	7590	03/16/2007	EXAMINER	
MAINE & ASMUS P. O. BOX 3445 NASHUA, NH 03061			NGUYEN, CHUONG P	
			ART UNIT	PAPER NUMBER
			3663	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/16/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/530,392	HANEY, PHILIP J	
	<b>Examiner</b>	<b>Art Unit</b>	
	Chuong Nguyen	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 21 January 2007.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 14-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 05 April 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 12/4/05 & 3/9/06.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of invention IIB in the reply filed on 01/22/2007 is acknowledged.
2. Claim 1-13 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/22/2007.
3. Applicant's election with traverse of a single disclosed species in the reply filed on 01/22/2007 is acknowledged. The traversal is on the ground(s) that the species are not patentably distinct from each other. This is found persuasive. The restriction requirement of a single disclosed species has been withdrawn.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the term "*linearly constrained*" renders the claim indefinite. It is not clear of what encompasses and is meant by the term "*linearly constrained*". The metes and bound of the claims cannot be ascertained by one having ordinary skill in the art.

Other claims are also rejected based on their dependency of claim 14.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodson (5,045,860) in view of Gilbert et al (6,292,758).

Regarding claim 14 and as best understood, Hodson discloses a system for tracking a mobile target comprising: a plurality of sensors (i.e. sensing stations) for detecting the mobile target (Fig 2 “S<sub>A</sub>, S<sub>B</sub>, S<sub>C</sub>”; at least col 6, lines 7); a first processing section (i.e. data collection or fusion unit in conjunction with the processor) that receives target data from the sensors and processes target localization information (Fig 2 “20, 24”; at least col 7, line 68); a second processing section (i.e. processor) wherein the target localization information is linearly constrained and generates a regional measurement (Fig 2 “24”; Fig 4-7; at least col 11, line 41). Hodson lacks a third processing section that filters the regional measurement and generates a filtered target position. Gilbert et al teach in the same field of endeavor a third processing section (i.e. a processor with a tracking filter) for filtering and generating a filtered target position (at least col 13, line 45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a third processing section for filtering and generating

a filtered target position as taught by Gilbert et al in the system of Hodson to suppress the error in tracking a target position by filtering out the noise or unwanted signals to refine a position.

Regarding claim 15, it would be obvious that Hodson's invention would be concerned with the target data from the sensors is at least two bearing lines and the target localization information is processed using triangulation from the bearing lines (Fig 2, 4-7; at least col 6, line 35).

Regarding claim 16, Hodson lacks the filtered target position that updates a target track. Gilbert et al teach in the same field of endeavor the filtered target position that updates a target track (Fig 4; at least col 14, line 29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the filtered target position that updates a target track as taught by Gilbert et al in system of Hodson for providing better accuracy in tracking a target.

Regarding claim 17, Hodson lacks a tracking filter. Gilbert et al teach in the same field of endeavor a tracking filter (i.e. a Kalman filter) (Abstract; at least col 3) wherein as described in applicant's specification page 26, paragraph [0099], the Kalman filter is either a constant gain or a variable gain filter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a tracking filter as taught by Gilbert et al in the system of Hodson for filtering out the noise or unwanted signals from the multiple received signal thereby suppressing the error in tracking a target position.

Regarding claim 19, Hodson discloses a threshold bound (i.e. predetermined boundary values) for a target position (Fig 4-7; at least col 11, line 55) instead for the target path. Gilbert et al teach in the same field of endeavor the target path (Fig 4; at least col 14, line 29) that is

updated by the target position. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a the target path as taught by Gilbert et al in the system of Hodson et al for better accuracy in determining a path for a target vehicle.

8. Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodson as modified by Gilbert et al as applied to claim 14 above, and further in view of Amerga et al.

Regarding claim 18, although Hodson as modified by Gilbert et al do not explicitly disclose a central processing center for communication, it would be obvious that Hodson as modified by Gilbert et al invention would be concerned with a central processing center (i.e. Hodson – data collecting unit in conjunction with the process; Gilbert et al – processor in conjunction with a tracking filter) (Hodson – Fig 2 “20, 24”; at least col 7, line 68; Gilbert et al – at least col 13, line 45). Also, Amerga et al teach in the same field of endeavor a central processing center (i.e. Base Station Controller) (Fig 1 “120”; at least [0035]). In addition, utilizing a central processing center for communication is well known in the art of telecommunication or navigation system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a central processing center as taught by Amerga et al in the system of Hodson as modified by Gilbert et al to improve the communication in the network and provide a better tracking system.

Regarding claim 20, Hodson as modified by Gilbert et al lack the repeater. Amerga et al teach in the same field of endeavor the repeaters (Fig 2B-14; at least [0046]). In addition, utilizing the repeater to extend the coverage of the network is well known in the art of telecommunication system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the repeater as taught by Amerga et al in the

system of Hodson as modified by Gilbert et al to improve the communication in the network and provide a better tracking system.

9. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

10. The statements of intended use or field of use (i.e. claim 14 – detect, that receives, generates, that filters; claim 16 – updates; claim 19 – if, establishes; claim 20 – receives) are essentially method limitations or statements of intended or desired use. Thus, these claims as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647.

See MPEP § 2114 which states:

A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2nd 1647

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

***Conclusion***

11. The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong Nguyen whose telephone number is 571-272-3445. The examiner can normally be reached on 8:00 - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CN

*JACK KEITH*  
SUPERVISORY PATENT EXAMINER